

Appl. No.10/773,788

Attorney Docket No.: 113394 CON

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CLAIMS

1-38. Canceled.

1           39. (New) A method for use in a communication system, the  
2 communication system including at least first, second and third gatekeepers having  
3 respective associated subscriber terminals, the method comprising  
4           the first gatekeeper receiving a request for information from one of its  
5 associated subscriber terminals;  
6           if the information is not known by the first gatekeeper, the first gatekeeper  
7 sending the request only to the second gatekeeper,  
8           if the information is not known by the second gatekeeper, the second  
9 gatekeeper sending the request only to the third gatekeeper, and  
10          if the information is known by the third gatekeeper, the third gatekeeper  
11 sending the information to the first gatekeeper,  
12          wherein each of the first, second and third gatekeepers communicates with its  
13 respective associated subscriber terminals over a respective communication path that  
14 does not include any other gatekeeper,  
15          wherein each of the first, second and third gatekeepers establishes  
16 communication among its associated subscriber terminals,  
17          and wherein the communication between the subscriber terminals associated  
18 with the first gatekeeper passes through no gatekeeper other than the first gatekeeper,  
19 the communication between the subscriber terminals associated with the second  
20 gatekeeper passes through no gatekeeper other than the second gatekeeper, and the  
21 communication between the subscriber terminals associated with the third gatekeeper  
22 passes through no gatekeeper other than the third gatekeeper.

1           40. (New) The invention of claim 39 wherein the third gatekeeper sends the  
2 information to the first gatekeeper via the second gatekeeper.

1           41. (New) The invention of claim 39 wherein the requested information is  
2 an address.

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1 42. (New) The invention of claim 41 wherein said address is an application  
2 address, a network address or a resource address.

1 43. (New) The invention of claim 39 wherein the requested information is  
2 information about a resource.

1 44. (New) The invention of claim 43 wherein said resource is one of:  
2 bandwidth, a port, a buffer, a link, a trunk, processing unit capacity, and a quality-of-  
3 service parameter.

1 45. (New) The invention of claim 39 wherein each of the gatekeepers is  
2 adapted to use signaling messages conforming to International Telecommunications  
3 Union standard H.323 to receive and transmit information between at least itself and  
4 its respective subscriber terminals.

1 46. (New) A communication system comprising at least first, second and  
2 third gatekeepers and a plurality of communicating entities, the first, second and  
3 third gatekeepers being adapted to receive and transmit signaling messages among  
4 themselves,

5 wherein the first gatekeeper directly communicates gatekeeper-to-gatekeeper  
6 information request signaling messages only with the second gatekeeper,

7 wherein the second gatekeeper directly communicates gatekeeper-to-  
8 gatekeeper information request signaling messages with the first gatekeeper and the  
9 third gatekeeper,

10 wherein the third gatekeeper directly communicates gatekeeper-to-gatekeeper  
11 information request signaling messages with the second gatekeeper but not with the  
12 first gatekeeper,

13 wherein the first, second and third gatekeepers are all at a single gatekeeper  
14 hierarchical level within the communication system,

15 wherein each of the first, second and third gatekeepers is adapted to receive  
16 and transmit signaling messages between itself and associated ones of the

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17 communicating entities over a respective communication path that does not include  
18 any other gatekeeper,

19 wherein each of the first, second and third gatekeepers is further adapted to  
20 establish communication between its associated communicating entities,  
21 and wherein the communication between the communicating entities  
22 associated with the first gatekeeper passes through no gatekeeper other than the first  
23 gatekeeper, the communication between the communicating entities associated with  
24 the second gatekeeper passes through no gatekeeper other than the second  
25 gatekeeper, and the communication between the communicating entities associated  
26 with the third gatekeeper passes through no gatekeeper other than the third  
27 gatekeeper.

1 47. (New) The invention of claim 46 wherein ones of said gatekeeper-to-  
2 gatekeeper signaling messages include requests for at least one of an application  
3 address, a network address and a resource address.

1 48. (New) The invention of claim 46 wherein ones of said gatekeeper-to-  
2 gatekeeper signaling messages include requests for information about a resource.

1 49. (New) The invention of claim 48 wherein said resource is one of:  
2 bandwidth, a port, a buffer, a link, a trunk, processing unit capacity, and a quality-of-  
3 service parameter.

1 50. (New) The invention of claim 46 wherein at least said gatekeeper-to-  
2 gatekeeper signaling messages conform to an international standard for packet-based  
3 communications.

1 51. (New) The invention of claim 46 wherein at least ones of the  
2 communicating entities are terminals, gateways, multipoint control units or  
3 communication networks.

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1           52. (New) The invention of claim 39 wherein the first gatekeeper is adapted  
2 to cache information received by the first gatekeeper from another one of the  
3 gatekeepers so that if the first gatekeeper is again requested for said information, the  
4 first gatekeeper will be able to provide said information to the source of the request.

1           53. (New) The invention of claim 46 wherein each particular gatekeeper  
2 that receives requested information from another one of the gatekeepers stores that  
3 information within that particular gatekeeper so that if that particular gatekeeper is  
4 again requested for said information, it will be able to provide said information to the  
5 source of the request.

1           54. (New) A method for use in a communication system in which at least  
2 first, second and third gatekeepers are each connected to one or more associated  
3 subscriber terminals via one or more networks, in which each of the at least first,  
4 second and third gatekeepers has a respective associated database, and in which each  
5 of the at least first, second and third gatekeepers, in response to a request for  
6 information from a requesting one of its associated subscriber terminals, provides the  
7 requested information from that gatekeeper's associated database to the requesting  
8 subscriber terminal if that gatekeeper's associated database contains the requested  
9 information, the method comprising  
10           the first gatekeeper receiving from a requesting one of its associated subscriber  
11 terminals a request for information that is not contained in the database associated  
12 with the first gatekeeper,  
13           the first gatekeeper sending the request only to the second gatekeeper,  
14           if the information is not contained in the database associated with the second  
15 gatekeeper, the second gatekeeper sending the request only to the third gatekeeper,  
16 and  
17           if the information is contained in the database associated with the third  
18 gatekeeper, the third gatekeeper sending the information to the first gatekeeper,  
19           wherein each of the first, second and third gatekeepers is adapted to receive  
20 and transmit signaling messages between itself and its associated subscriber

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21 terminals over a respective communication path that does not include any other  
22 gatekeeper,  
23 wherein each of the first, second and third gatekeepers is further adapted to  
24 establish communication between its associated subscriber terminals,  
25 and wherein the communication between the subscriber terminals associated  
26 with the first gatekeeper passes through no gatekeeper other than the first gatekeeper,  
27 the communication between the subscriber terminals associated with the second  
28 gatekeeper passes through no gatekeeper other than the second gatekeeper, and the  
29 communication between the subscriber terminals associated with the third gatekeeper  
30 passes through no gatekeeper other than the third gatekeeper.

1 55. (New) The invention of claim 54 wherein the third gatekeeper sends the  
2 information to the first gatekeeper via the second gatekeeper.

1 56. (New) The invention of claim 54 wherein the requested information is  
2 an address.

1 57. (New) The invention of claim 56 wherein said address is an application  
2 address, a network address or a resource address.

1 58. (New) The invention of claim 54 wherein the requested information is  
2 information about a resource.

1 59. (New) The invention of claim 58 wherein said resource is one of:  
2 bandwidth, a port, a buffer, a link, a trunk, processing unit capacity, and a quality-of-  
3 service parameter.

1 60. (New) The invention of claim 54 wherein each of the gatekeepers is  
2 adapted to use signaling messages conforming to International Telecommunications  
3 Union standard H.323 to receive and transmit information between at least itself and  
4 its respective subscriber terminals.